The Federal Reserve's Current Framework for Monetary Policy: A Review and Assessment

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Elements of the Current Framework for Monetary Policy

Humphrey-Hawkins mandate

2012 Statement of Principles

- Symmetric 2% inflation target
- Commitment to maximum employment

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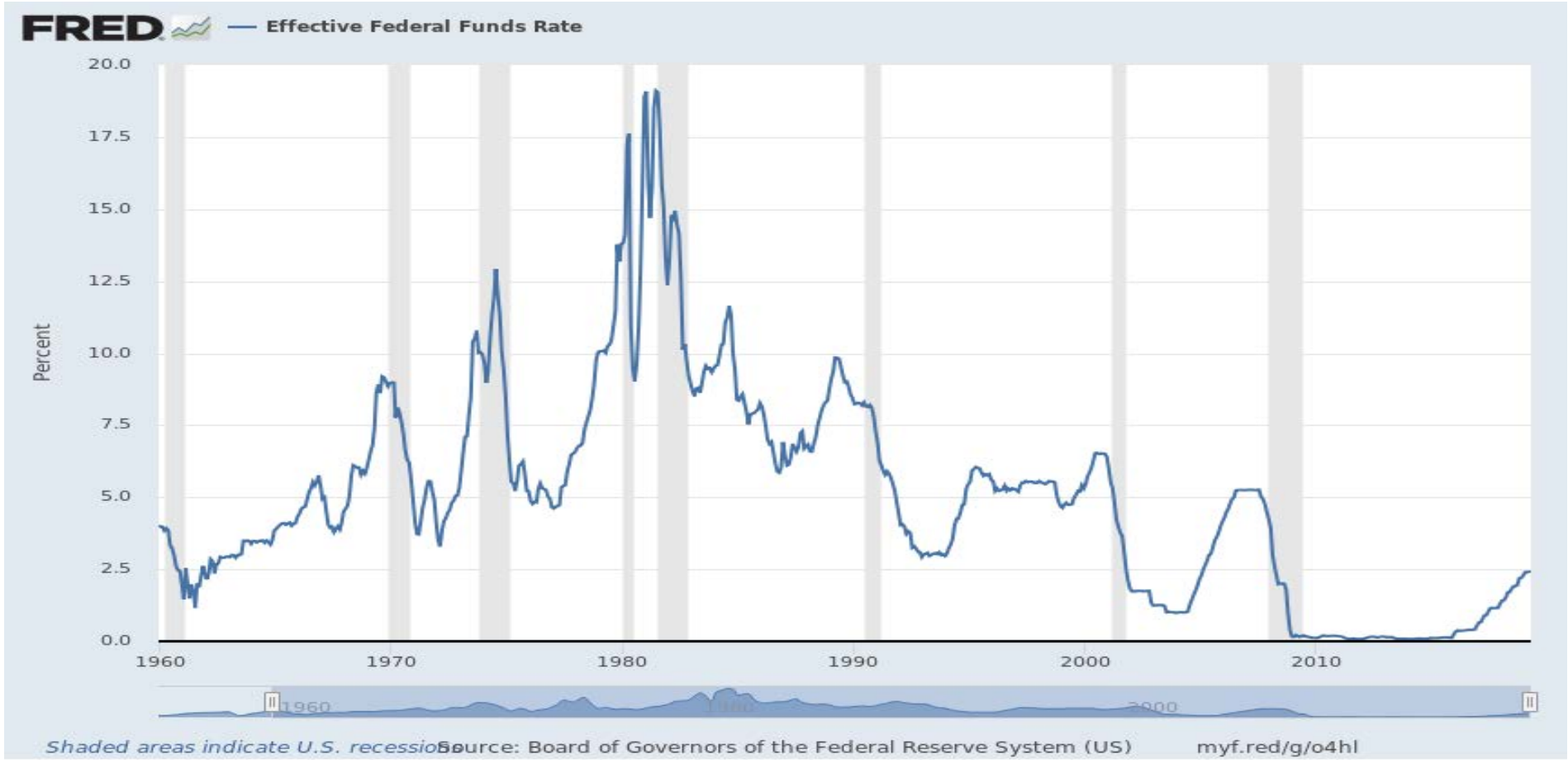

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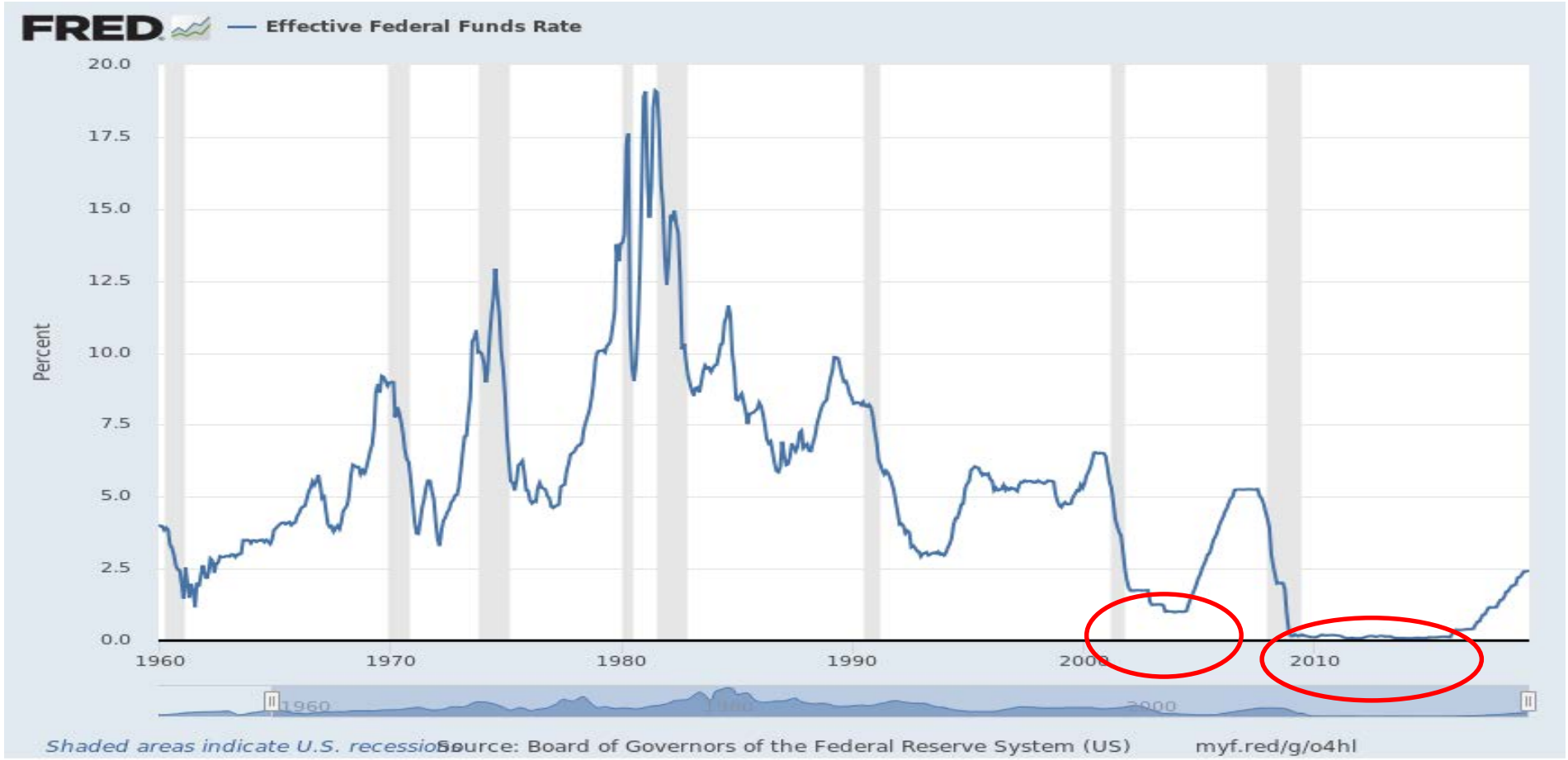

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- Symmetric 2% inflation target
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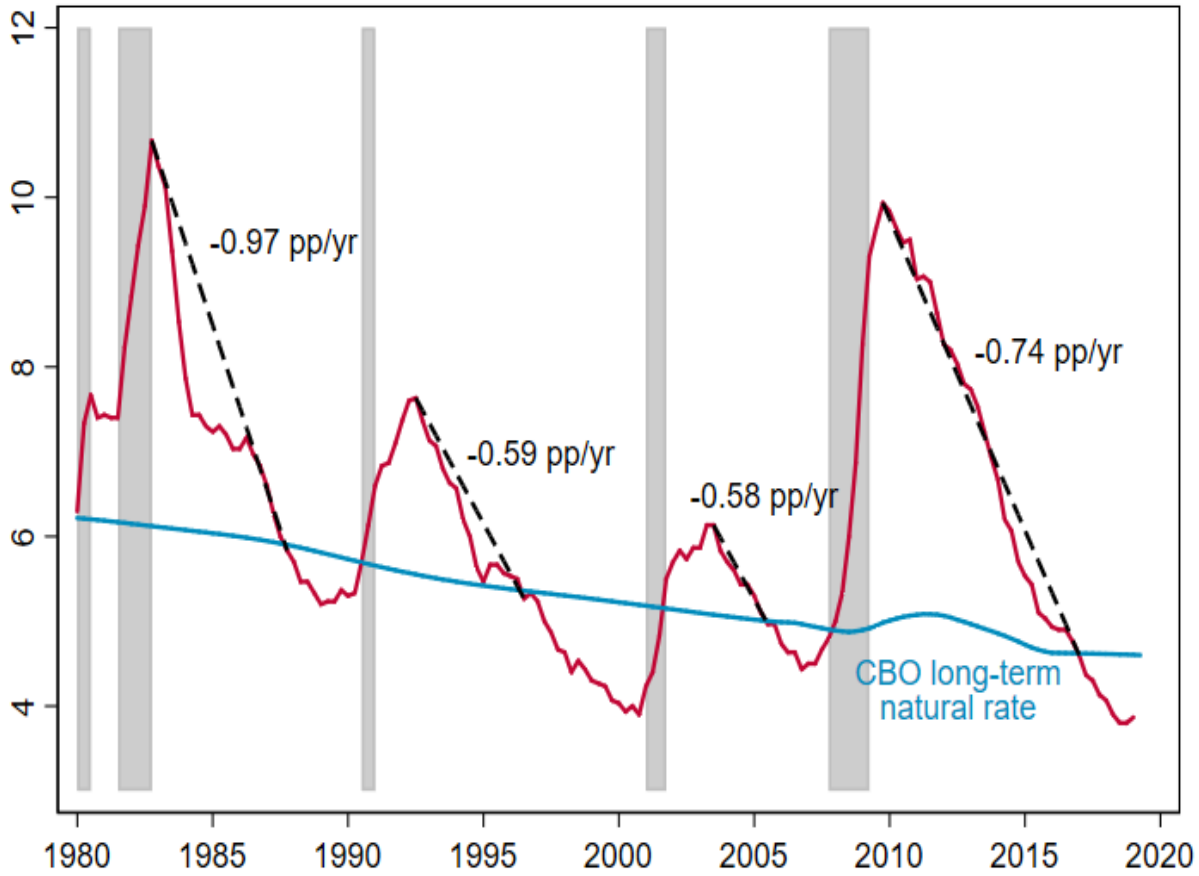
Tools to achieve these goals

- Level of **Fed funds rate**
- **Forward guidance** about future Fed policy
- Large scale asset purchases (**LSAPs**)
- Communications and transparency

Backdrop: The Slow Recovery

Unemployment rate, 1980-2019



Dashed line is trend from peak unemployment rate to CBO NAIRU. Shading denotes NBER-dated recessions.

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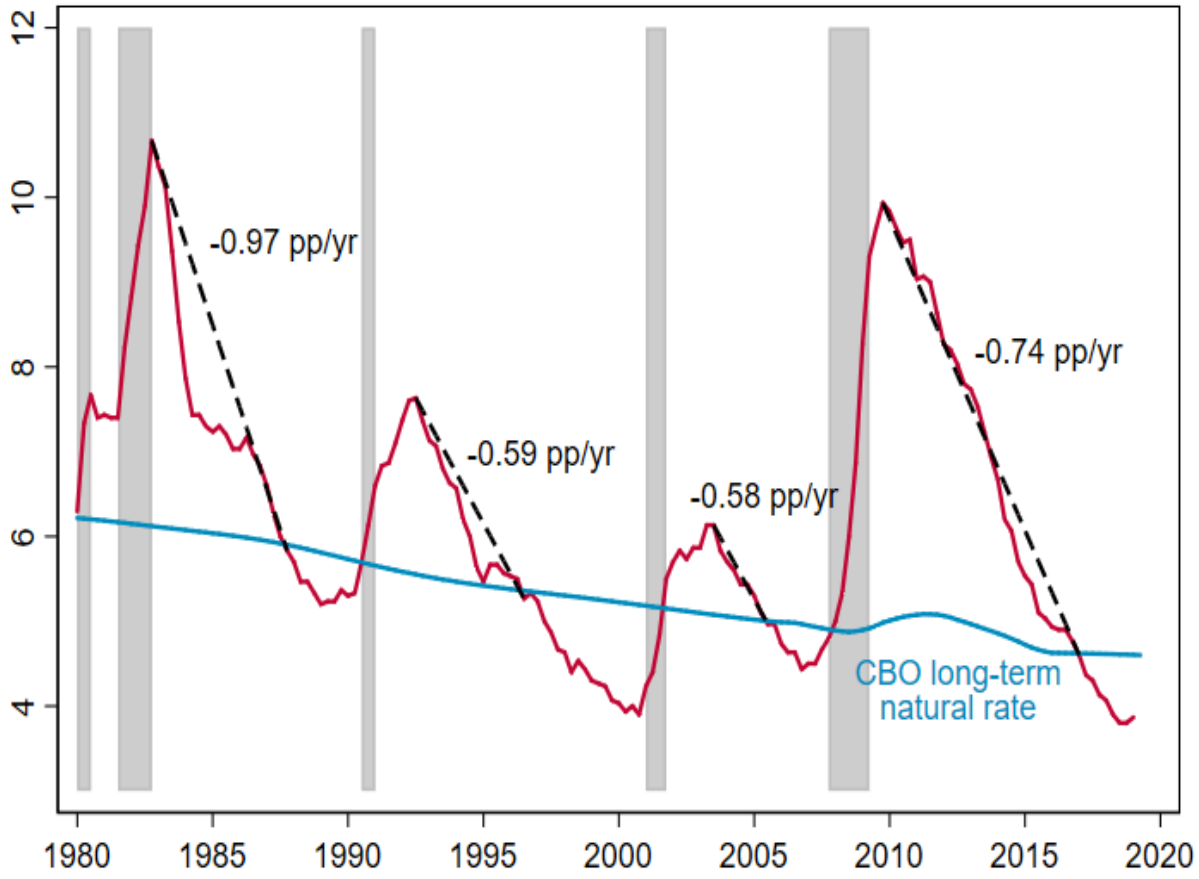

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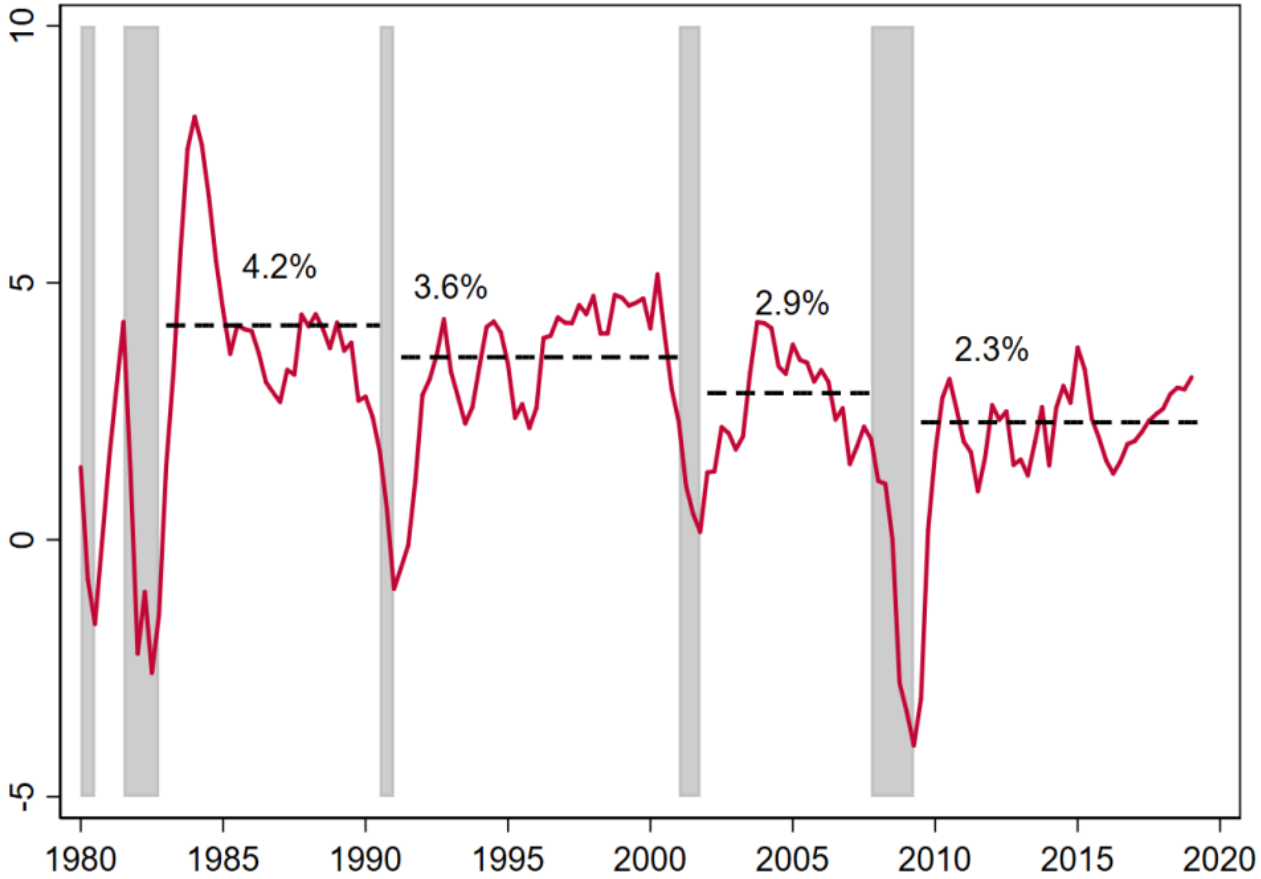
4-quarter GDP growth, 1980-2019



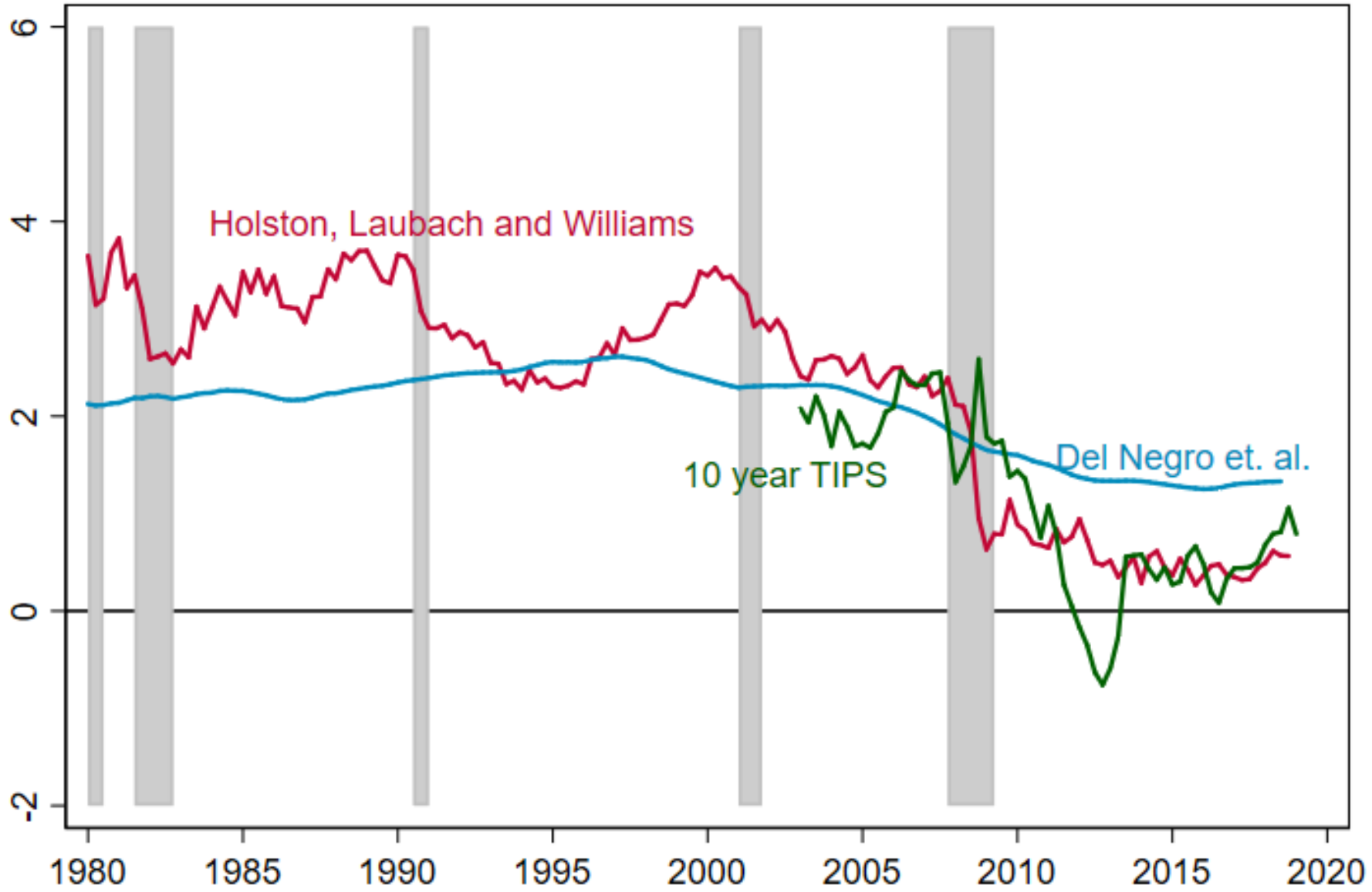
Dashed line is mean growth rate over expansion. Shading denotes NBER-dated recessions.

Headwinds to GDP growth:

- Baby boom retirement (demographic LFPR decline)
- Productivity slowdown (TFP)
- Fiscal headwinds, until 2018

The Decline in R*

Two estimates of the long-term equilibrium real rate of interest (R*) & the yield on 10-year TIPS



Sources: Holston, Laubach, and Williams (2017), updated, and Del Negro et. al (2017), updated; TIPS: FRED. Shading denotes NBER-dated recessions.

Empirical Model

Two monetary policy interventions (shocks)

- Level shock: Change level of Fed funds rate
- Slope shock: Change slope of Treasury yield curve (10 year-FF spread)

Key elements of model

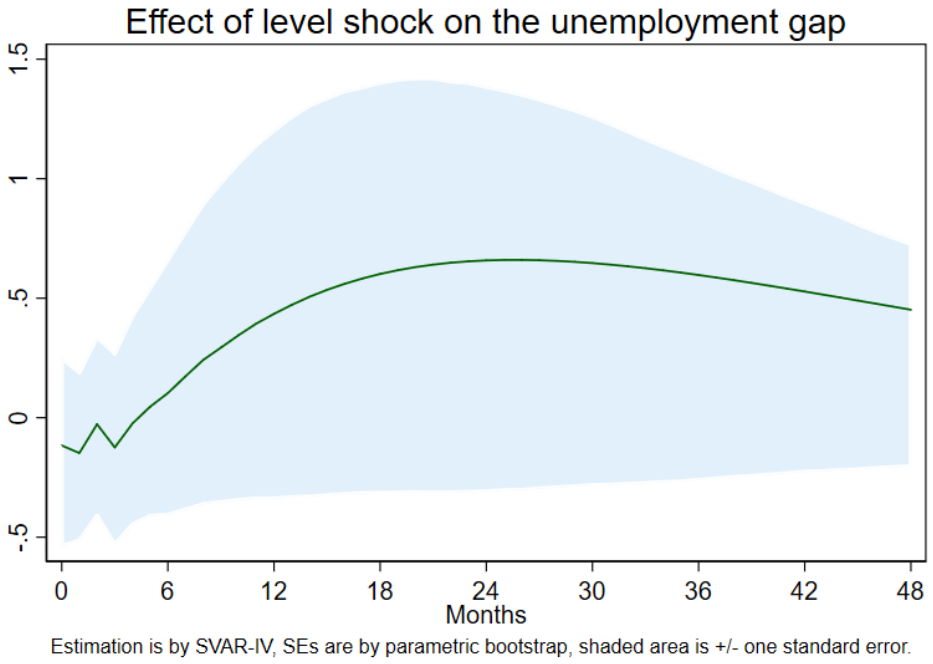
- Estimate effect on the unemployment rate of policy change in (a) Fed funds rate and (b) slope by instrumental variables regression
  - The instruments are announcement-window changes in interest rates (Kuttner (2001))
- Estimate response of inflation to the unemployment rate using a hybrid New Keynesian Phillips Curve

Empirical Model: Impulse Response Functions

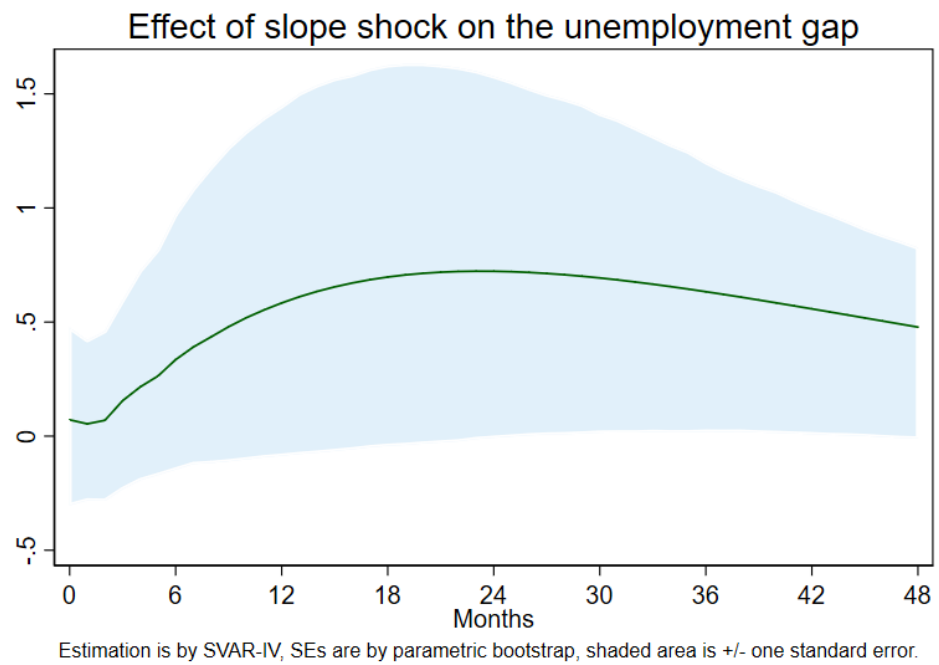
(a) Response of the unemployment gap to unit level and slope shocks

- Level shock increases Fed Funds rate by 1 pp, slope shock increases 10 year-Fed funds spread by 1 pp.

Level shock



Slope shock



(b) New Keynesian Phillips curve

- Post-2000 data results in flat estimated Phillips curve: Long-run slope ~0.2
- Steeper Phillips curve simulated in paper

Simulation structure

- Posit an historical policy hypothetical
- Compute implied monetary policy shocks
- Compute effects on rates of unemployment and inflation

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Policy simulations

A. Earlier or later liftoff
B. No ZLB
C. Alternative LSAPs/forward guidance policies
D. Inherit higher inflation rates, interest rates, and inflation target
E. Temporary price level target
F. Lower for Longer

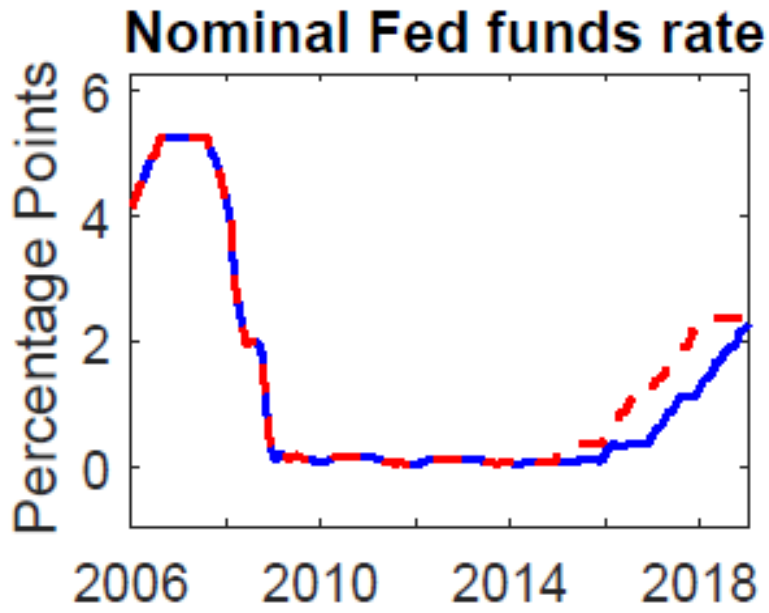
Counterfactuals

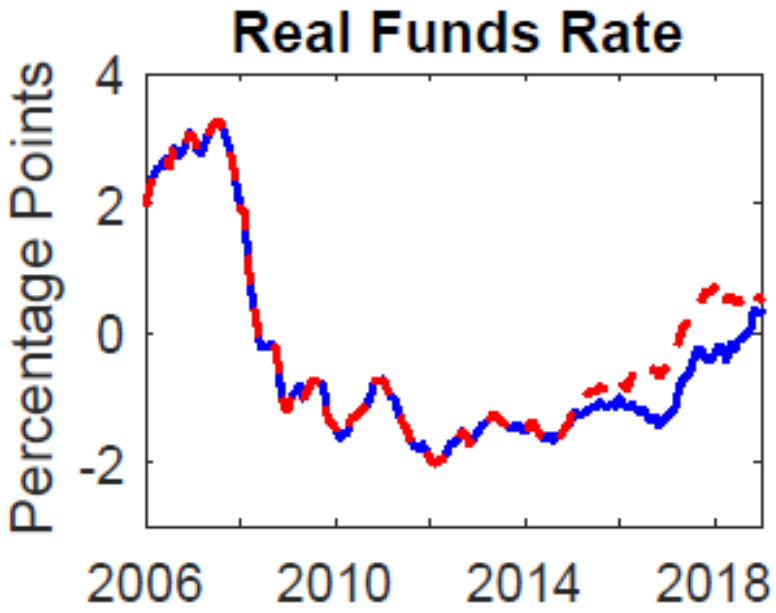
Early liftoff

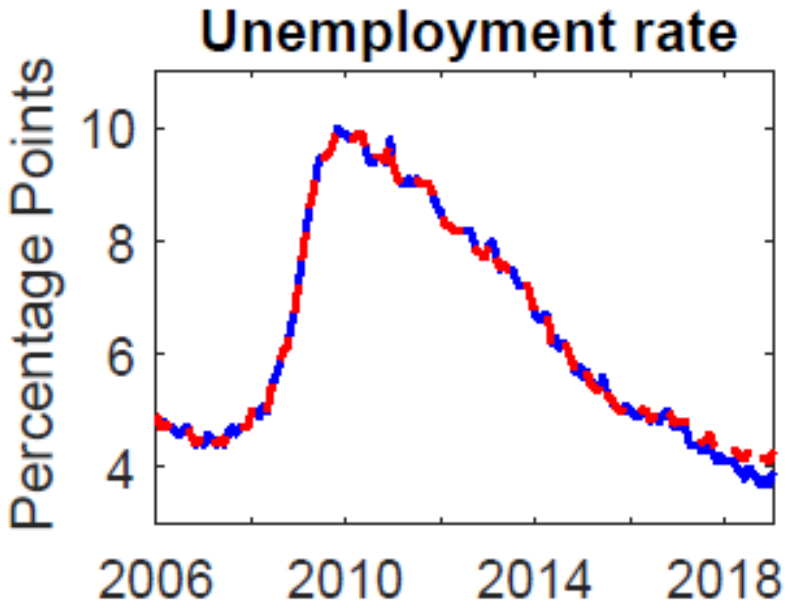
- Fed funds rate lifts off one year earlier (Dec. 2014 instead of Dec. 2015)
- No change in slope policy (LSAPs or forward guidance)

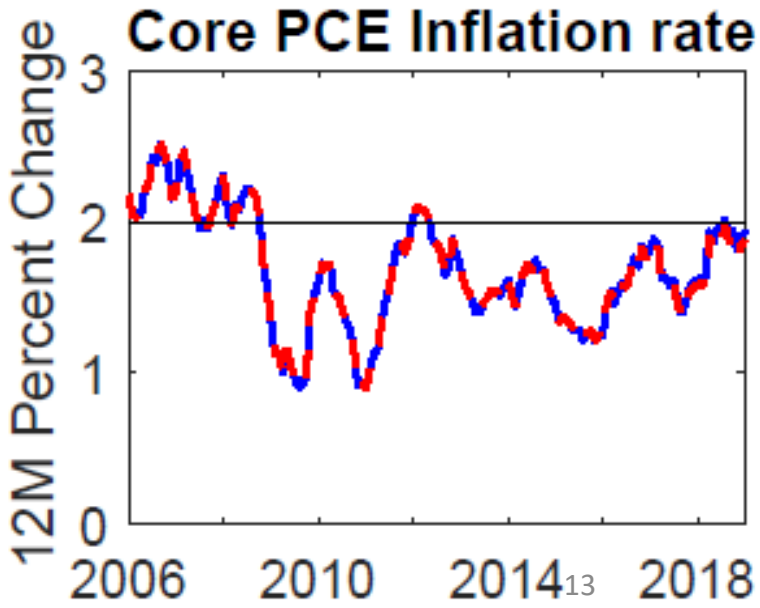
- - - - - - - counterfactual

——————— actual









Counterfactuals

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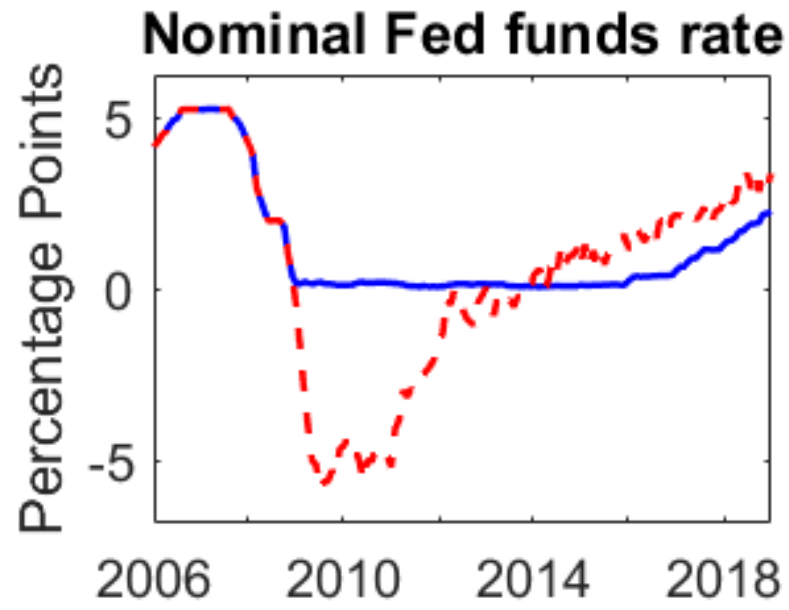
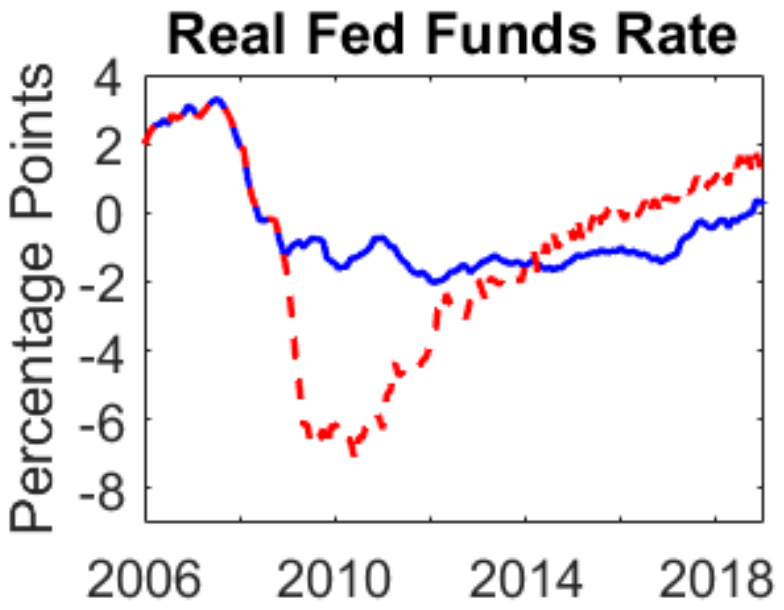
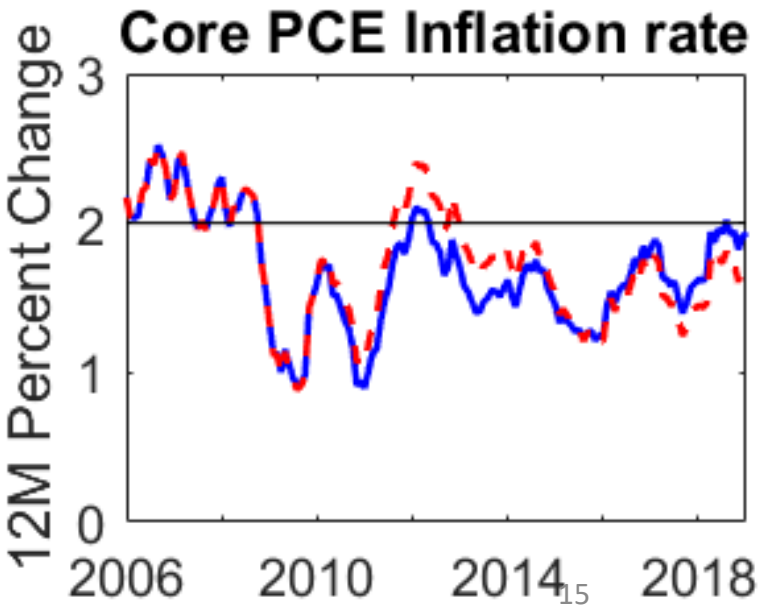
Performance Under Counterfactuals

"Balanced rule" (Taylor (1999) rule), with no ZLB and no LSAPs

- Calibrate slope policy to undo the effects of actual LSAPs







- - - - - - - counterfactual

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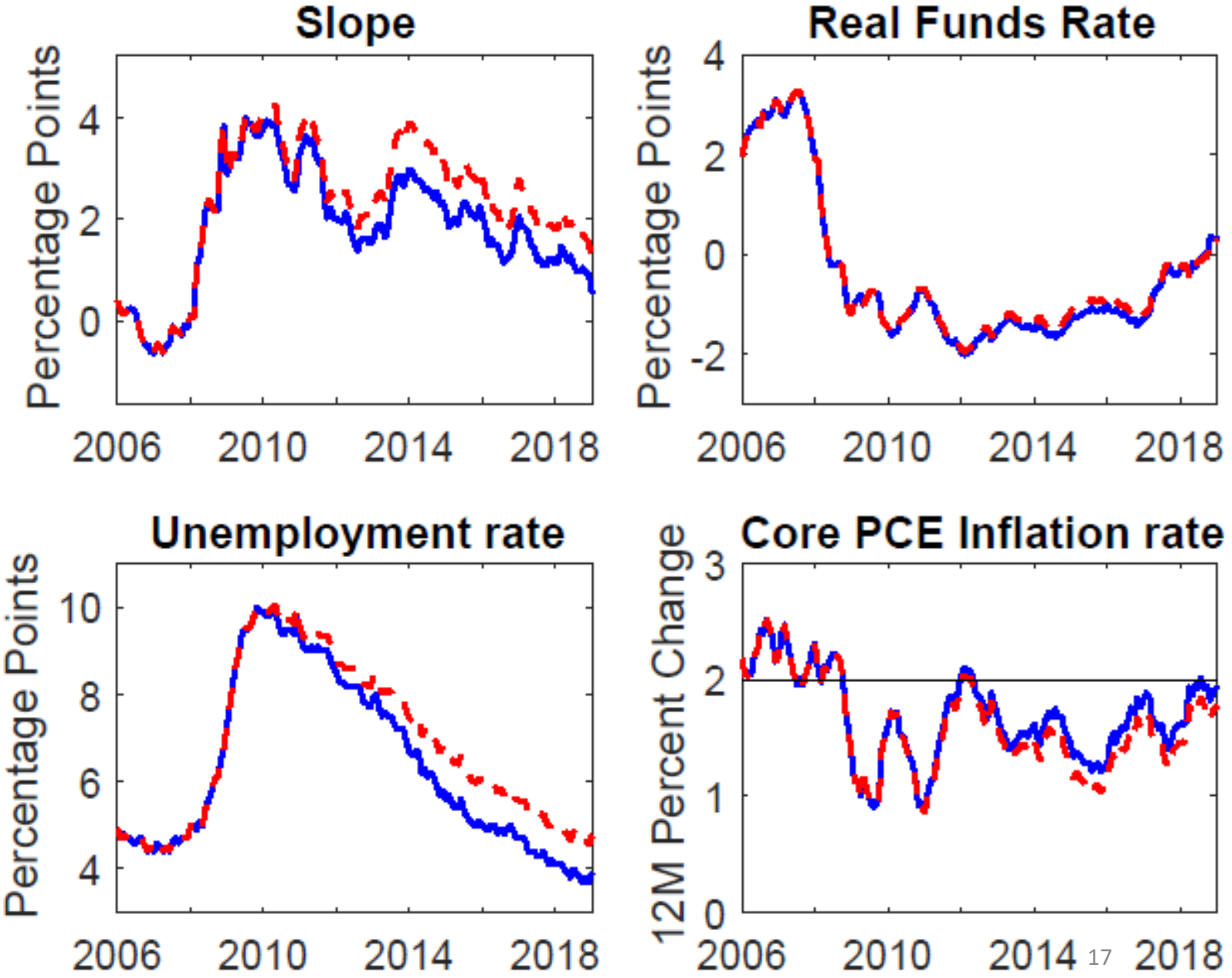
Performance Under Counterfactuals

No LSAPs

- Historical Fed funds path



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Performance Under Counterfactuals

"Stronger sooner:" flatten yield curve by additional 2pp for 18 months, starting December 2008

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- - - - - - - counterfactual

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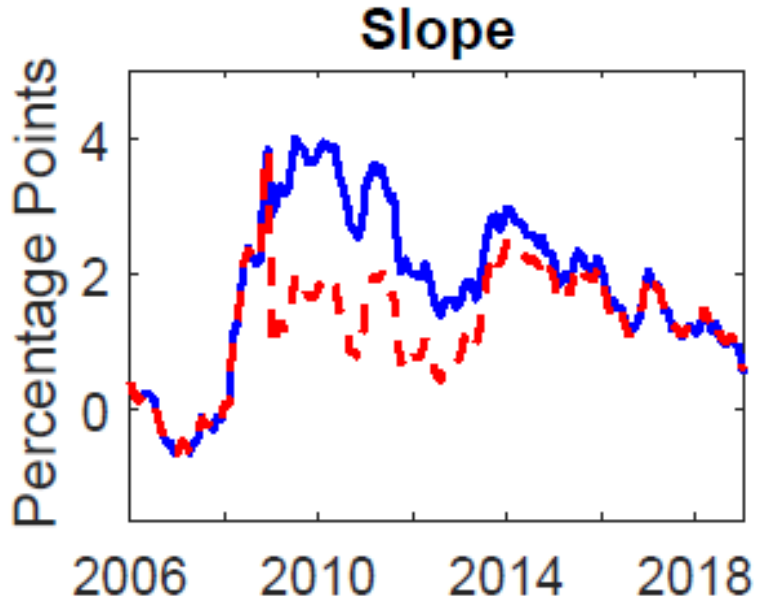

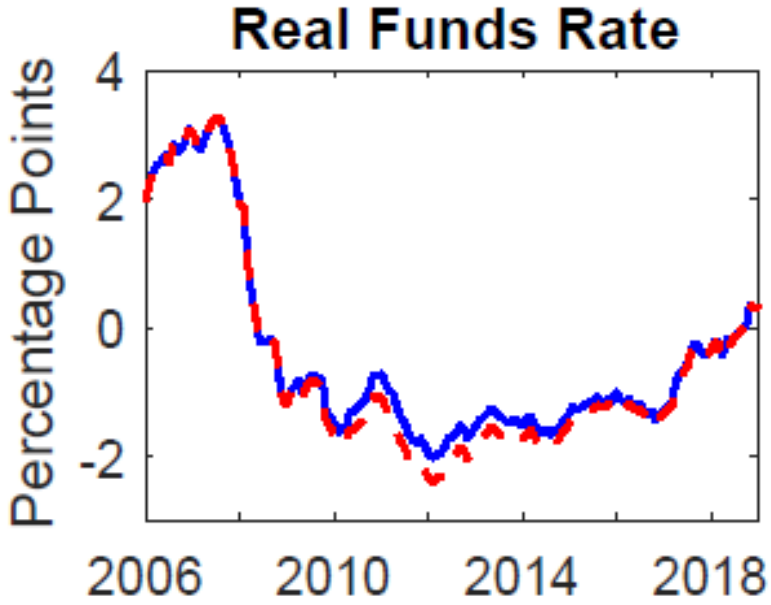

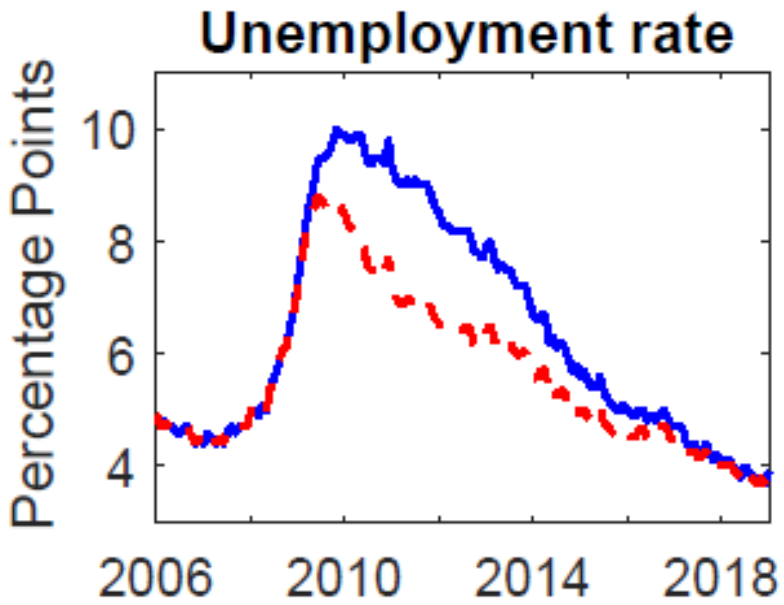

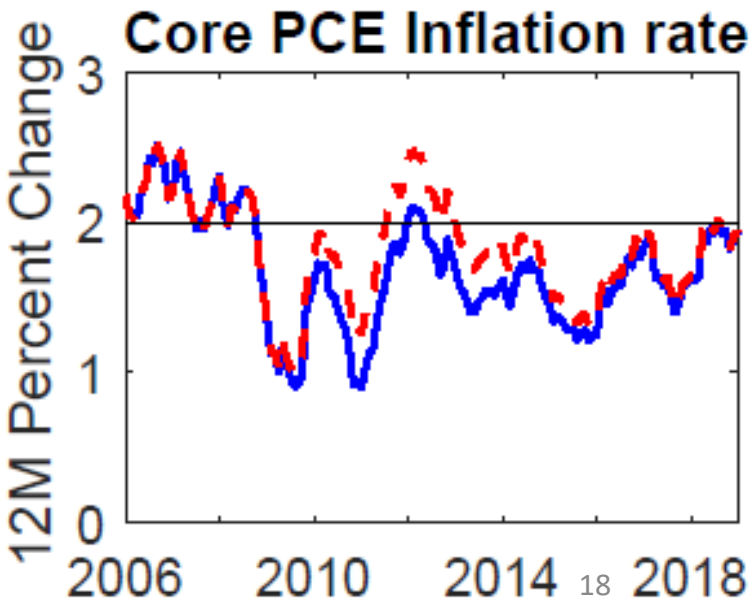

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Performance Under Counterfactuals

Inherit all nominal rates & inflation target one pp higher ($\pi^* = 3\%$)
+ No LSAPs

- Funds rate liftoff when either:
  - *Ugap* ≤ 1pp, or
  - $\pi \geq \pi^* + 0.5$

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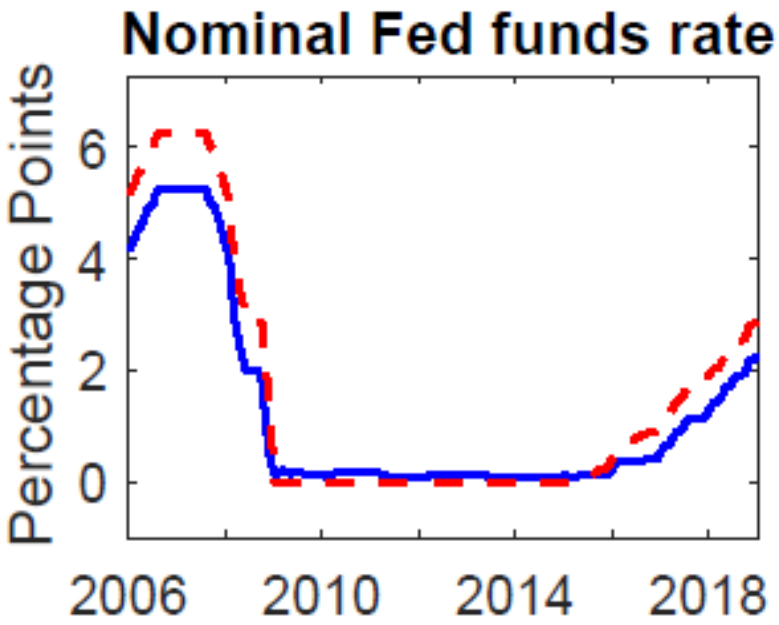

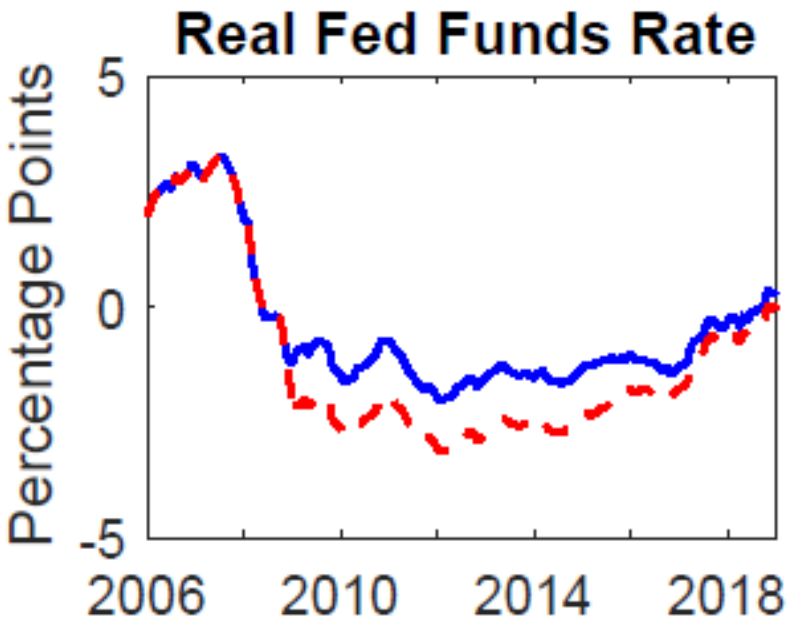

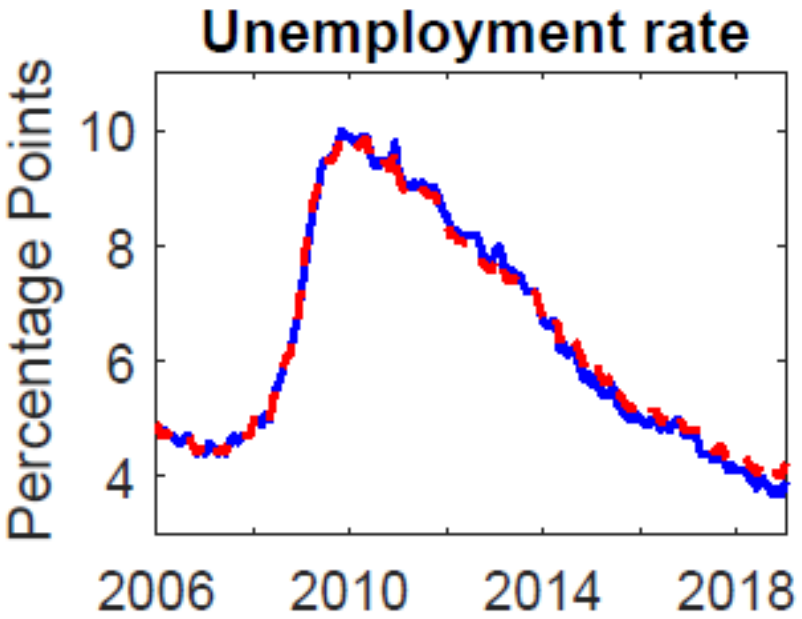

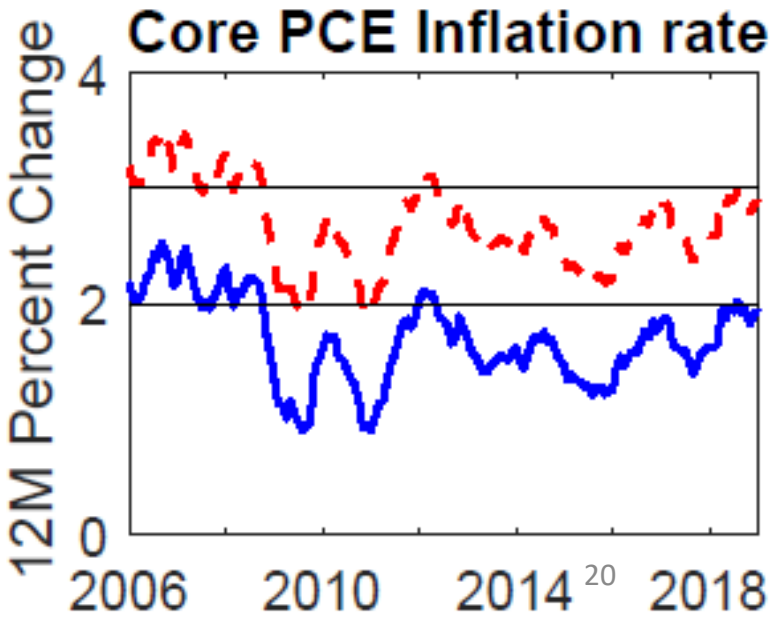

Performance Under Counterfactuals

Inherit all nominal rates & inflation target one pp higher ($\pi^* = 3\%$)
+ Historical slope policy

- Same LSAPs, forward guidance policy as actual
- Funds rate liftoff when either:
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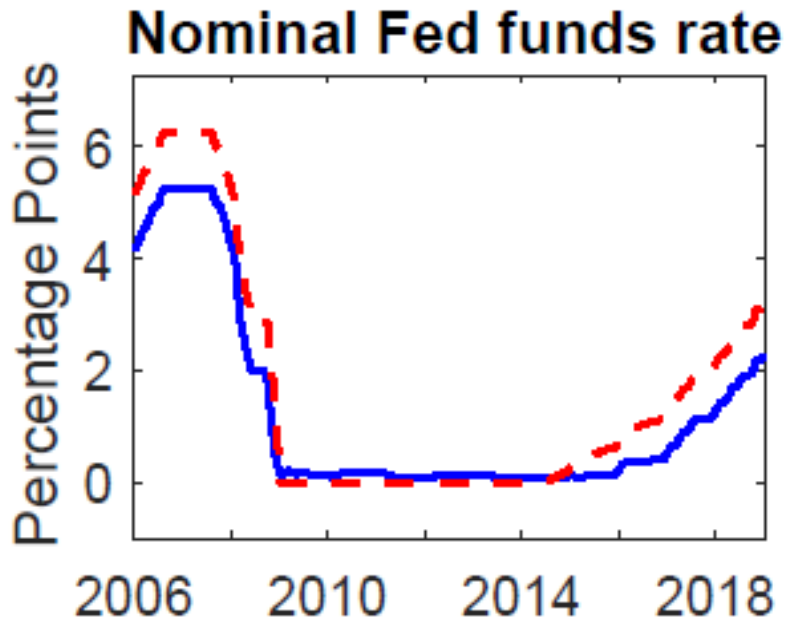

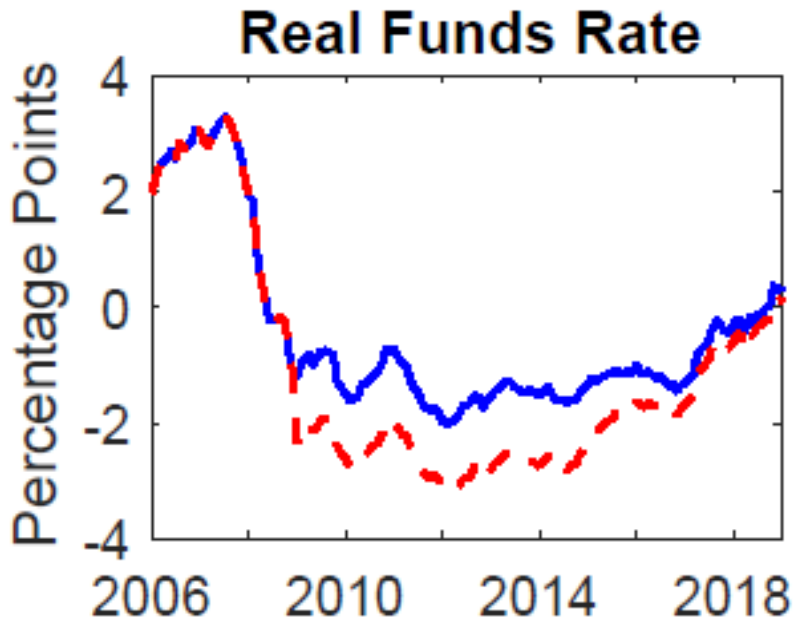

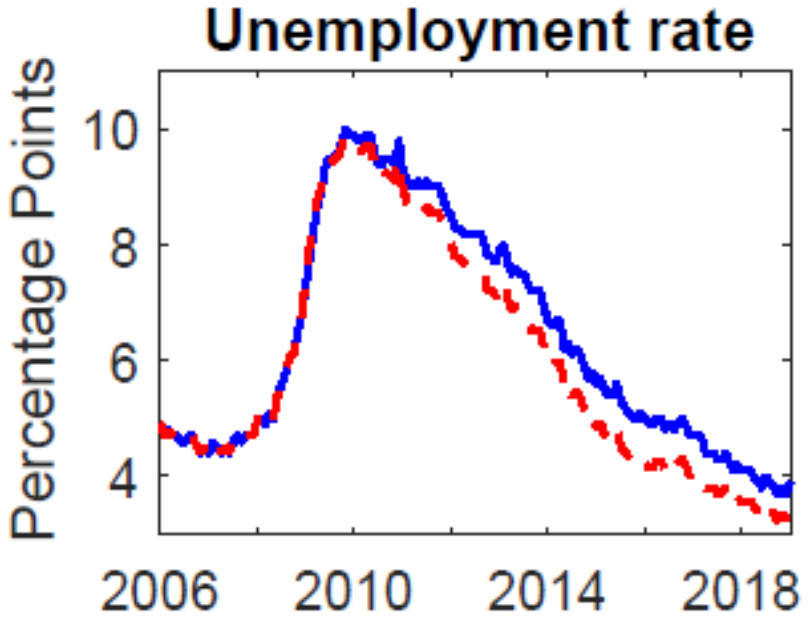

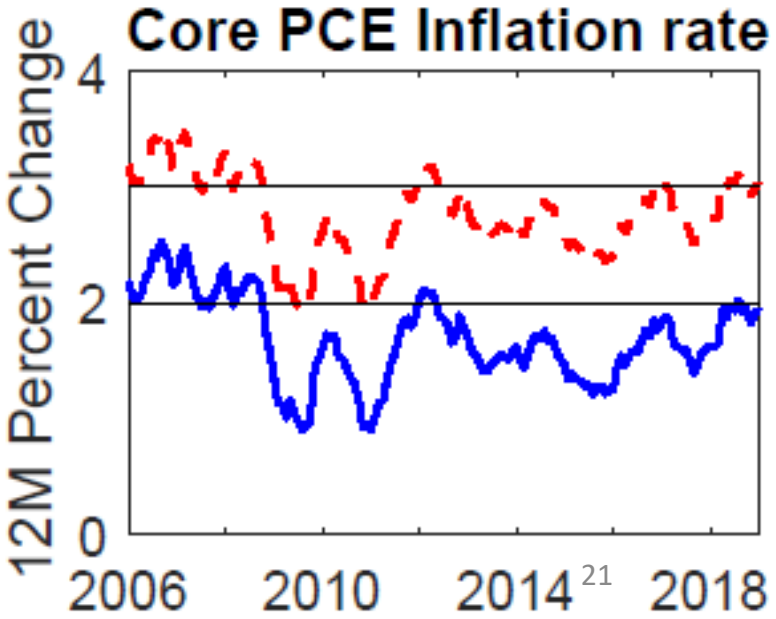

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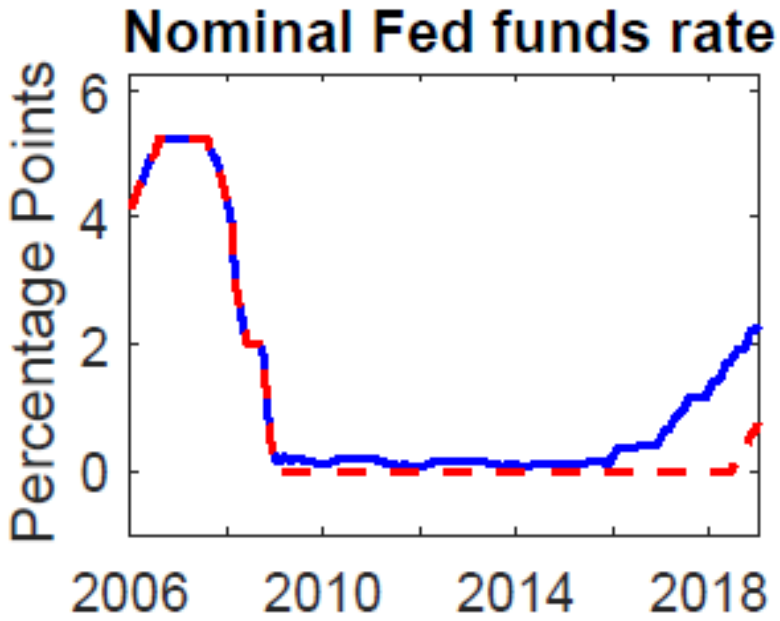
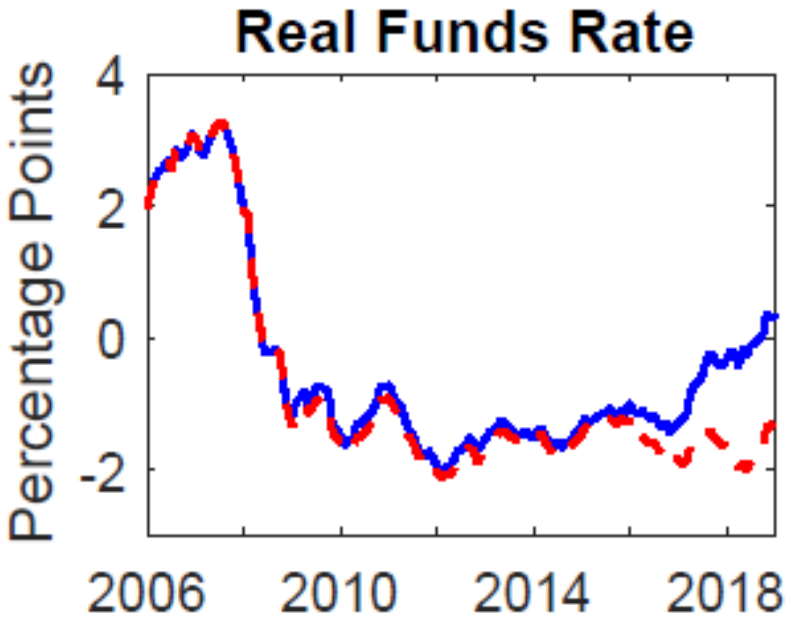
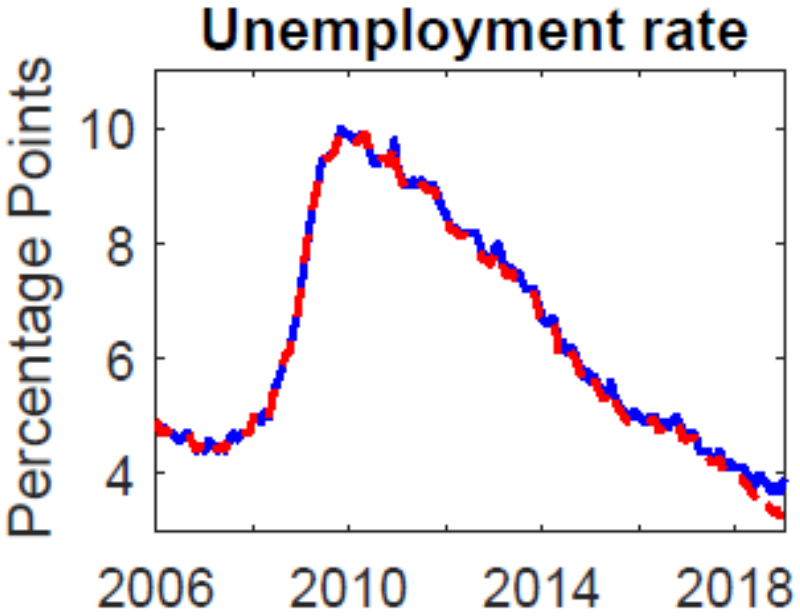
Performance Under Counterfactuals

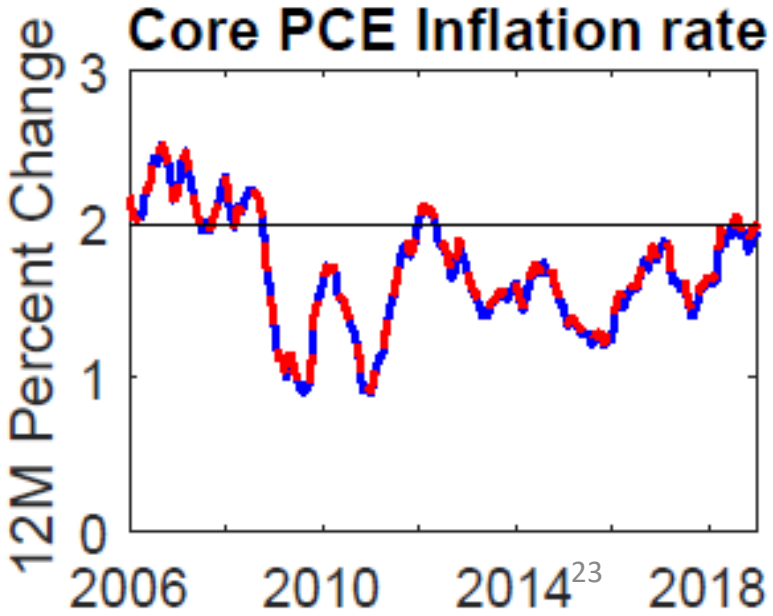
TPLT with 12 month lookback, implemented by Fed funds + Historical slope policy

- Funds rate at ZLB until price level target hit
- Same LSAPs, forward guidance policy as actual









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Performance Under Counterfactuals

Taylor (1993) rule with makeup + No LSAPs

- Time-varying *R** (Holston, Laubach, and Williams (2017))
- Funds rate stays at zero until it makes up "below-zero gap"
  - *This is the third rule in Feb. 2019 Monetary Policy Report, p. 37*

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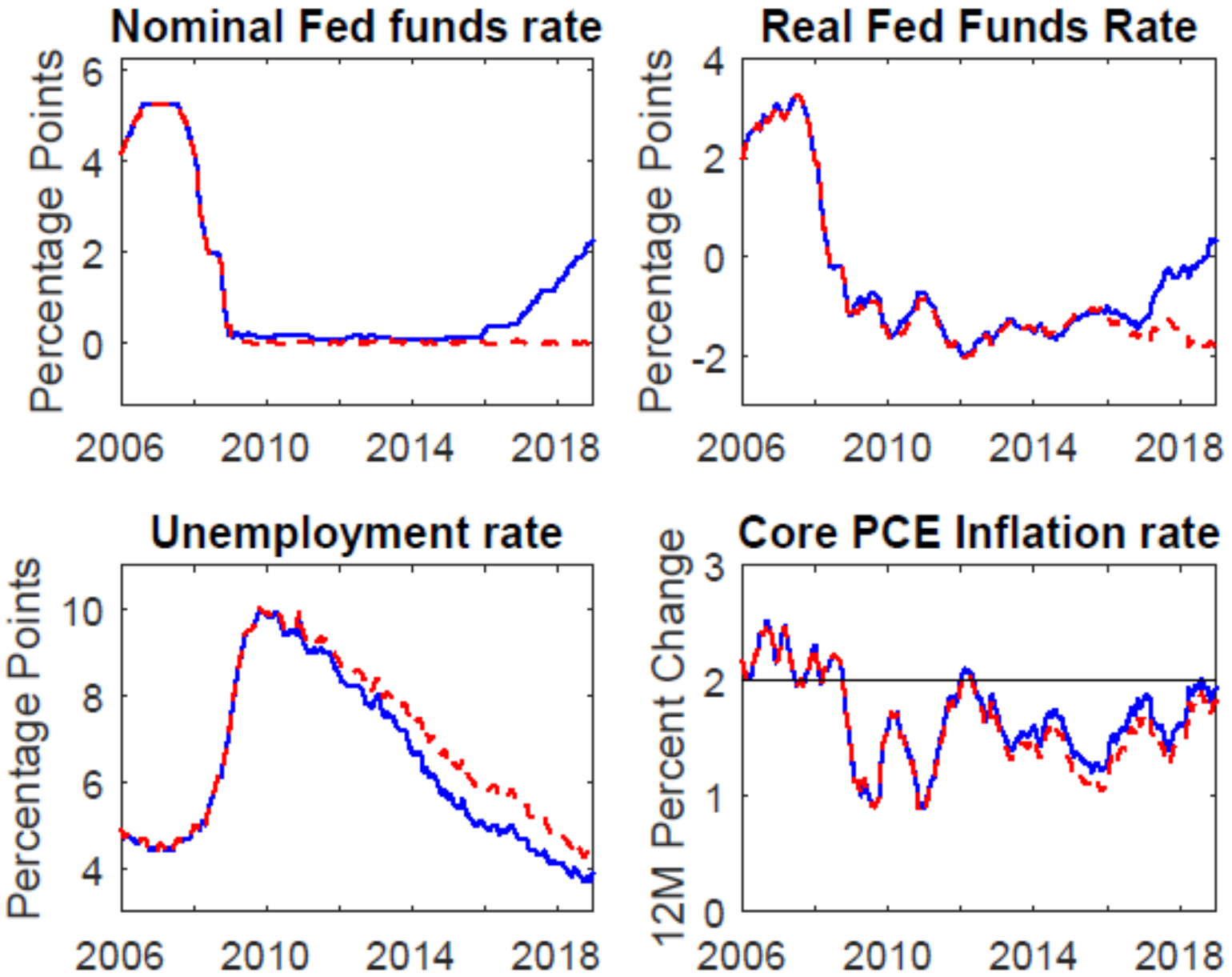
——————— actual



Summary

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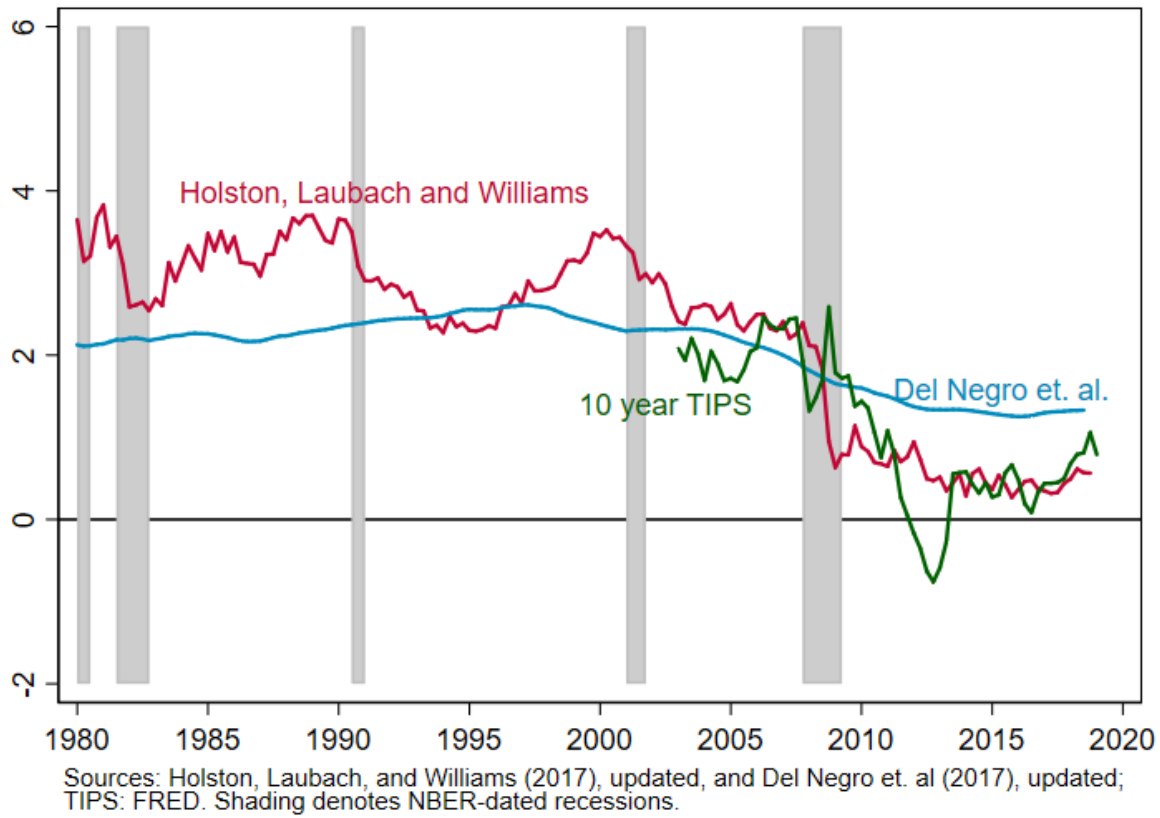
Estimates of R*



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Federal Funds Rate